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INTRODUCTION

During this century the pace of research in veterinary science has steadily increased and the problem of co-ordinating and applying the information gained has become acute.

The majority of scientific papers contain useful facts but of necessity they all embody much detail which is valuable only to those engaged in closely related fields of research. It was felt therefore that an annual review touching on a few of the more important advances and perhaps dealing with one or two subjects fairly exhaustively would serve a useful purpose in our efforts to improve the health of livestock by applying new knowledge as rapidly as possible. Dalling (1942) gave a wide survey of "recent advances" and no pretence is made that the present review adequately covers the field of veterinary medicine; many important subjects, particularly those of interest to workers throughout the Empire, have been completely omitted but the subjects dealt with are undoubtedly of great immediate importance in countries with an intensive agriculture. It is to be hoped that if this review becomes an annual feature all important subjects will gradually be dealt with. No doubt many important references have been omitted but an attempt has been made to quote those which will be most useful to the reader who wishes to study the various subjects more fully.

Miscellaneous

CONTAGIOUS ABORTION

This subject was last reviewed (*Vet. Rec.* **54.** 175) when it was announced that the Ministry of Agriculture Laboratory was going to issue two live vaccines; Strain 19 (Vaccine 1) and Strain 45 (20) (Vaccine 2) for use in the field. It was emphasised that the difficulty of maintaining non-vaccinated herds free from the disease rendered vaccination the only possible solution.

McEwen (1942) has made a further report on his field trials with Strain 45 (20). Before vaccination started, in 88 herds, 34·2 per cent. of the 2,032 cows were positive and 11·1 per cent. suspicious reactors. Among 1,928 animals with a reliable breeding history for the pregnancy immediately prior to the first blood test, there were 15·8 per cent. abortions, in which the animals gave a positive or suspicious agglutinin titre. Of 434 animals which were vaccinated in these herds and have completed their pregnancy 5·3 per cent. have aborted and had positive or suspicious agglutinin titres. It is emphasised that the vaccine itself produces no agglutinins to confuse subsequent testing and that the trouble of vaccination before each pregnancy is trivial compared with the importance of the disease.

Bonynge (1942) has described the results of 14 years' effort to control brucellosis in a number of very large herds. "The earlier belief was that Brucellosis control would be accomplished without great difficulty under a comparatively simple program of testing and segregation."—Despite meticulous precautions "experience has demonstrated these concepts to be erroneous." In 1935 "the economic burden and apparent futility of brucellosis control under prevailing circumstances was most discouraging. Home-bred heifers raised under ideal conditions had proved to be especially hazardous [because of their great susceptibility] as replacements. In 1937 calfhood vaccination with strain 19 was begun in a herd of about 1,000 animals. During 1939 vaccinated animals began to calve. During 1941 eight herd tests were carried out and the average incidence of positive reactors was only 0·1 per cent., a result never achieved before. The April and May tests for 1942 revealed eight positive reactors; all of these were young animals which for special reasons had not been vaccinated. It is admitted that before final judgment can be passed results over a much longer period will be required." McEwen has frequently stressed that there is little or no evidence that calfhood vaccination will produce a lifelong immunity particularly when a relatively avirulent vaccine such as Strain 19 is used and it may prove that revaccination after each calving is necessary. In the U.S.A. numerous workers have emphasised the dangers of indiscriminate vaccination; they feel that calfhood vaccination should be combined with testing and lead to eventual eradication. Birch (1942) says the State must provide the central guidance, tags for identifying animals and the vaccine. It should carry out free blood tests or insist on blood testing if the vaccine is provided free, it should encourage the removal of chronic reactors and there ought to be official recognition of vaccinated disease free herds. In many areas calfhood vaccination combined with test and segregation is considered to be the only way in which eventual eradication is likely to be accomp'ished. The achievements under the test and slaughter policy must not, however, be overlooked. Mohler and Wight (1942) report that in 1941 there were 446 counties in 23 States classified as "modified accredited disease-free areas." These counties contain approximately 4,000,000 cattle exclusive of steers and calves. The general experience is that eradication is usually far easier in small than in large herds.

For many years it has been held, especially by French workers, that a vaccine provokes a better immune response when it is slowly absorbed from the site of inoculation. This can be achieved in a number of ways; Velu and Zottner (1935) claimed that when live or dead *Brucella* organisms were incorporated in a lanolin base, they were much more antigenic than the usual saline suspension. Since that time a number of somewhat conflicting results have been published but it may eventually be found that an effective vaccine can be produced by incorporating dead *Brucella* organisms in a lanolin base. Whilst free from the danger of producing infection this vaccine would still have the disadvantage of producing agglutinins unless it were prepared from a rough strain.

SWINE FEVER

When this subject was last reviewed (*Vet. Rec.* **53.** 622) it was concluded that a useful immunity could be produced using inactivated blood or tissue (lung spleen and lymphatic glands) from an infected pig as the antigen. The tissue was inactivated in the presence of formalin or eucalyptus oil and the blood in the presence of crystal violet.

Doyle (1942) has now published the results of investigations in this country with crystal violet-blood vaccines. He found that the virus was inactive after three days at 37° C.; as the vaccine is usually incubated 14 days at 37° C. this provides a wide margin of safety. The vaccine does not produce a solid immunity until twelve days after inoculation and before that time pigs may be abnormally susceptible; it follows that healthy pigs in infected premises must not be vaccinated. The presence of 0·5 per cent. phenol or the use of citrated blood made no difference to the antigenic value of the vaccine or its keeping qualities. It is pointed out that the use of citrated blood would cheapen the production of vaccine.

The virulence of English field strains of virus varies considerably and they are generally less virulent than the American strains which were used for the production of the vaccine. Vaccine produced from an English field strain produced only a poor immunity when the vaccine was tested against the same English virus and none against an American virus. On the other hand, vaccine prepared with *the American virus produced a good immunity against various English field strains.* Even with 3 c.c. doses of vaccine immunity persisted for ten months. Large numbers of pigs have been used in these experiments and their immunity has been tested both by the inoculation of virus and long exposure to infected pigs. There is, therefore, every reason to believe that the field trial of this vaccine which is now being undertaken will prove successful.

GRASS SICKNESS OF HORSES

Our knowledge concerning this disease has been reviewed by Greig (1942), and his paper was fully abstracted (*Vet. Rec.* **54.** 544). The general conclusion was that the condition may be looked upon as a virus disease if only because other possibilities have been eliminated. There would appear to be, in fact, no grounds of objection to the assumption that its cause is a virus, except that its mode of transmission is very difficult to conceive. This same difficulty, however, obtains in the case of anterior poliomyelitis, which, although known to be caused by a filterable virus, is transmitted by means that are very imperfectly understood.

CALF PNEUMONIA AND ENTERITIS

There can now be little doubt that there is at least one pneumotropic virus which causes disease in the bovine. Using Seitz filtrates of infective material Nagel (1937) infected one out of four calves inoculated intranasally; the pure virus infection was passaged five times in calves. Lamont and Kerr (1939) also carried out three passages with Seitz filtrates but believed that an influenza-like

organism was associated with the disease. Barker (1942) produced pneumonia in mice with a virus isolated from an outbreak of pneumo-enteritis in calves. After serial passage in mice the virus regularly produced disease when inoculated intranasally in calves, these inoculated calves infected other calves by contact exposure and the typical disease was produced.

Chemotherapy

By introducing the term chemotherapy Ehrlich intended to mark off from the general body of pharmacology a particular type of investigation having as its aim the discovery of chemical substances acting specifically on pathogenic infections. His aim was to shift the interest of pharmacologists from the host to the attacking parasite. The aim of chemotherapy was to find substances maximally toxic for the parasite and minimally toxic for the host. Dale (1923) emphasised that despite Ehrlich's concept no really fundamental advance had been made in our knowledge of chemotherapy.

The position is now completely different; we know how to "intervene in the combat" and assist the defending cells of the animal. Ehrlich's concept of the necessity for a specific affinity between a drug and the infecting parasite has, in a broad way, been confirmed experimentally as will be shown when discussing the sulphonamides.

The chemotherapeutic treatment of protozoal infections is certainly the oldest and probably still the most important branch of the subject but it is regretted that it cannot be dealt with here.

The Sulphonamides

History.—Sulphanilamide was first synthesised in 1908. A German worker (1933) was the first to report on the therapeutic value of prontosil and his claims were supported by experimental evidence in 1935. In the same year French workers showed that prontosil was broken down to sulphanilamide in the animal body and that this was the active substance. The first English reports on the value of these drugs appeared in 1936 (Hignett, 1941; Long and Bliss, 1939). Since that time the value of over one thousand related compounds has been tested (Marshall, 1941). The nomenclature, structure and uses of the common sulphonamides have been described by Ardley (1941); only four of the compounds will be considered here.

Mode of Action.—The action of sulphanilamide on haemolytic streptococci and other bacteria is simply to prevent the utilisation of a closely related chemical *p*-aminobenzoic acid which is essential for their multiplication; the existing bacteria are then destroyed by the natural defence mechanisms of the body. This discovery, due to the work of Fildes and his colleagues, is of outstanding importance and has placed modern chemotherapy on a rational basis; already several compounds having a similar relationship to essential growth substances have been designed, synthesised and found effective, and the mode of action of antiseptics is being studied with fresh interest (*Brit. Med. J. 1942.* (*ii*). 223). It was thought that sulphanilamide had a specific action almost confined to the streptococci and the related compounds had a more or less specific action on certain other bacteria; this is now known to be untrue. The bacteriostatic effect of the various sulphonamides is directly related to their capacity for preventing the utilisation of *p*-aminobenzoic acid and their relative therapeutic effect can be gauged by the amount of *p*-aminobenzoic acid required to antagonise them *in vitro*; the relative amount is approximately the same whatever the test organism. The ratio of amount required to inhibit the action of sulphanilamide, sulphapyridine and sulphathiazole is approximately 1 : 5 : 50. The bacteriostatic potencies of the three substances are roughly of the same order with comparatively small variations for different organisms (Green and Parkin, 1942). The most active drug against one organism, namely sulphathiazole, is normally the most active against all organisms. Obviously, however, the different bacterial species, and indeed different strains of the same species, vary greatly in their susceptibility to the sulphonamide group as a whole, and it is known that specially resistant strains may develop following unsuccessful therapy. In general it may be said that sulphapyridine and sulphathiazole will be reserved for treating diseases caused by more resistant organisms such as staphylococci and pneumococci but many factors—solubility, ease of administration, possible toxic effects, availability and price—all affect the choice of a drug.

Various derivatives of sulphanilamide will now be considered. Sulphapyridine and sulphathiazole have already been mentioned; they are more potent agents than sulphanilamide but their disadvantage is that they are even less soluble in water and in the body they form insoluble acetylated compounds which tend to block the kidneys and cause serious renal damage unless large amounts of fluid are administered.

Sulphaguanidine is fairly soluble in water and has the special property of being poorly absorbed by the intestine so that a high concentration can be attained in the intestinal contents without producing high blood concentrations with the resultant toxic symptoms; it is therefore valuable as an intestinal antiseptic.

The properties of sulphonamide E.O.S. have been described by Mutch (1941). This substance is highly soluble. It can be given by the mouth and is rapidly absorbed or can be injected intravenously; as it is much less alkaline than, say, the soluble sulphapyridine Na, there is little danger of producing irritation at the site of inoculation. Its administration does not lead to the formation of highly insoluble acetylated compounds and it is significantly less toxic than sulphanilamide. This is also true in the bovine species (McEwen *et al.*, 1941). It has the same range of activity as sulphanilamide and is fully effective against coliform infections of the urinary tract.

Local Application of the Sulphonamides.—There was at first some prejudice against the local application of the sulphonamide drugs but an increasing body of evidence leaves no doubt that the principle is fundamentally sound. It is stated (*Lancet.* 1942. (*i*). 769) that the local application of the sulphonamides has transformed war surgery; Green and Parkin (1942) say that in routine work this should be the first method adopted. The conditions governing the effectiveness of the sulphonamides when applied locally are not yet fully understood but despite other conflicting results the finding of Hawking (1942) that the effectiveness of sulphanilamide preparations was in inverse ratio to their rate of adsorption is generally true. He found that the best results were obtained by using the less soluble compounds sulphathiazole and sulphapyridine. These drugs are, however, expensive for use in veterinary medicine and it was found that the efficiency of sulphanilamide could be increased if its rate of absorption was reduced by incorporating it in an oily base. Various oils were tried and they were all more or less harmful to the wound; cod-liver oil was one of the worst in this respect, liquid paraffin was moderately bad, whilst cotton-seed oil was the least harmful. (This work was carried out in conjunction with British Drug Houses, Ltd., and Burroughs Wellcome, Ltd., and these firms could probably give further information to interested practitioners.) Despite the foregoing considerations good results have been reported following the local application of sulphanilamide powder by a number of workers including Swann (1942), although he was aware of the importance of a slow adsorption rate, and also used oily dressings.

The intraperitoneal use of sulphonamide preparations is a logical outcome of their local application and favourable results, both for the prevention and treatment of peritonitis following abdominal operations, have been reported by a number of workers (*Lancet.* 1941. (*i*). 576; 1942. (*i*). 235). Saline suspensions of sulphanilamide and sulphathiazole are almost non-irritant but sulphapyridine is unsuitable due to its irritant action. In an experimental study rabbits were given 300 mg. of sulphanilamide per Kg. body weight intraperitoneally with good results. This would correspond to a dose of 5 oz. for a 1,000 lb. cow and correspondingly less for small animals. The drug may be given orally at the same time, or subsequently, to maintain the blood concentration.

Toxicity.—Stableforth and Hignett (1939) found that large doses of sulphanilamide produced marked inco-ordination or even paralysis, inappetence and varying degrees of coma but animals recovered from these symptoms; diarrhoea and a drop in milk yield not exceeding 10 per cent. was produced in cows. The highest recommended dose (4 grammes per 20 lb. body weight) produced no serious symptoms. Other workers have recorded a slightly greater susceptibility. A decrease in the number of white cells (agranulocytosis) is one of the chief toxic effects and cyanosis due to the production of sulphaemoglobin or methaemoglobin may be produced. If these symptoms are not severe they will all cease when the drug is no longer administered. If the cyanosis is severe six daily doses of 1 to 1½ grains of methylene blue by the mouth has been advocated in man (Long and Bliss, 1939). Gibson (1941) questions whether the simultaneous administration of sulphur is as dangerous as it was thought to be and points out that in any case magnesium sulphate is not a source of sulphur. The renal damage caused by the insoluble acetylated compounds of sulphapyridine and sulphathiazole can be prevented by administering large amounts of water. It has been stated (*Lancet.* **1942. 1.** 621) that dogs do not acetylate the sulphonamide compounds.

(To be continued.)

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CLINICAL COMMUNICATION

The Incidence of Cancer in Dogs

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As the question of the incidence of cancer in dogs has been raised in your columns, and having in mind Mr. K. A. Miles' letter of August 15th, 1942, it was thought some relative figures extracted from the records of the Beaumont Animals' Hospital might be of interest.

The figures refer to two periods of twelve months, one ending on June 30th, 1939, and the other period on June 30th, 1942. The writers together saw the cases in the latter period, while those in the former were seen by Professor Wright, Mr. Formston and their colleagues.

Had histological examination been possible in more or all of the cases, the analysis and comparison would have been in a preferable form. It can be said, however, that a great number of the clinical diagnoses in both periods were made on grounds which permitted reasonable certainty of malignancy or otherwise. That a number of tumours have been incorrectly classified clinically is undoubted and it is of course borne in mind that the totals might have shown an increase if a *post-mortem* examination had been made of every dog and cat destroyed at the Beaumont Hospital during the periods to which the figures refer.

Of what modifying purely statistical considerations may be involved, the writers are unaware. They feel, however, that the percentage increases shown in the later as compared with the earlier period can be of no special significance and in any case are unlikely to be the result of war-time dietary changes introducing a carcinogenetic factor which so soon could be responsible.

As to growth rate of secondary tumours, observations at the Beaumont Animals' Hospital have not directed attention to any post-war increase.

No opinion can be offered as to the incidence of cancer in any particular breed, but on the question of incidence in relation to age in general, there appears little doubt that malignant neoplasms are more likely to occur after than before middle age, which is put at something of the order of five to six years. In the 1938-39 period the average age at which histologically proved malignancies were presented was 8·9 years, while in the same class in the 1941-42 period it was 8·8 years.

On the subject of neoplasia in the domesticated cat and dog, it still appears that the dog is strikingly more susceptible, even allowing for the fact that the cat, when suffering from the disease, may be less likely to reach the veterinary surgeon. Even more striking, at least from a clinical point of view, is the predisposition of certain anatomical sites. For example, a primary malignancy of the tonsil of the dog is not uncommon, but in the cat it is rare. On the other hand, the cat of the two animals, appears to monopolise oesophageal carcinoma as a neoplastic risk of existence.

	July 1st, 1938, to June 30th, 1939		July 1st, 1941, to June 30th, 1942	
	Dogs	Cats	Dogs	Cats
Total Number of Examinations Excluding Re-Inspections	4,954	2,160	3,277	2,273
Histologically benign tumours	40	2	15	1
Clinically " "	71	—	68	1
Total	111	2	83	2
Total as % of Total Number of Examinations	2·2%	0·09%	2·5%	0·09%
Histological tonsillar epithelioma and carcinoma	13	—	8	—
" oesophageal "	—	2	—	1
" epithelioma and carcinoma (other than above)	35	2	21	1
" sarcoma	33	7	19	—
" osteosarcoma	3	—	5	—
Clinical tonsillar epithelioma and carcinoma	8	—	2	—
" oesophageal "	—	3	—	1
" osteosarcoma "	1	—	1	—
Clinically malignant tumours (other than above)	58	4	51	1
Clinical mammary tumours	21	—	31	—
Total	172	18	138	4
Total as % of Total Number of Examinations	3·5%	0·83%	4·2%	0·17%
Total Number of Tumours	283	20	221	6
Total Number of Tumours as % of Total Number of Examinations	5·7%	0·92%	6·7%	0·26%

On the assumption that there is no serious error in these conclusions and in view of the strong association between certain specific irritations and some oral, laryngeal and oesophageal malignancies in man, a veterinary clinician may be permitted to reflect on the possibility of comparable irritations in the dog and cat.

Chronic oral sepsis resulting largely from encrusted teeth is common enough in both species, while in the dog examination of the tonsils very often reveals them in a quite unexpected state of prominent inflammation. The cat's tonsils, although not easily brought into view when the mouth is opened, are much less often found to be inflamed. Perhaps this apparent susceptibility of the dog to chronic tonsilitis can be linked with subsequent malignant changes.

To what extent, if at all, domestication of the dog and cat has introduced additional carcinogenetic factors seems very problematical, but in this respect diet deserves some consideration. The dog in general seems more likely than the cat to accept, of necessity, a compromise in the absence of sufficiency of meat. The cat, however, enjoying a greater freedom, is still able to exercise a predatory instinct with reasonable chances of success. Thus perhaps it can be maintained that the cat's diet is the more naturally carnivorous.

Apart from diet it does not appear very easy to find anything in the average dog's mode of life and environment which differs so greatly from the cat's, and both animals seem equally to share whatever environmental carcinogenetic risks there are, unless by human standards the cat has some claim to be more fastidious than the dog in its general habits.

DRUG POSITION IN GERMANY

"From reports that we have received (states *The Pharmaceutical Journal*), it is clear that Germany has not reached the stage of being seriously short of essential drugs. There is evidence, however, that various measures have been found necessary so as to husband the resources of the country in respect of various pharmaceutical chemicals and vegetable medicines which here in Britain are still being prescribed and purchased without much difficulty. For example, the Reich Chemical Board has recently taken over all supplies of quinine, aloes, caffeine, gentian, quillaia, iodine, bismuth and turpentine. Many of these substances have to be imported from non-European countries, either in the crude or prepared form, and increasing difficulties of transport are undoubtedly anticipated. Although information on the subject is by no means complete, there are indications that in the occupied countries restrictions on the use of these and other drugs are much more drastic than in Germany itself; for example, the following substances may be sold in Holland only on prescription: insulin, iodine and its compounds, theobromine, theophyllin, caffeine, and vitamin concentrates. Reports received many months ago showed that in France the shortage of certain drugs was very acute, and one can imagine that in the Balkan countries particularly supplies of pharmaceutical products have reached a very low ebb.

"A comprehensive measure that has been taken to meet the situation in the German Reich has been the promulgation of an Order giving general permission, with certain safeguards, for the substitution by pharmacists of drugs in short supply by others which are easier to obtain. Five classes of preparations are affected: (i) Cough mixtures with a basis of thyme, guaiacol or creosote and ammonium chloride. (ii) Throat remedies with a basis of menthol, volatile oils, borax, benzocaine, and formalin. (iii) Embrocations for rheumatic complaints with a basis of alcohol or oil. (iv) Analgesics with a basis of phenacetin, acetylsalicylic acid, caffeine. (v) Laxatives and purgatives with a basis of liquid paraffin, vegetable or synthetic substances (anthraquinone derivatives), and phenolphthalein. It is laid down that the substitute must have a similar pharmacological action, must be in the same pharmaceutical form, and its price must not differ markedly from that of the original article. Several aspects of the position may be portrayed by this decree. For example, the references to aspirin, to phenacetin and phenolphthalein may indicate a shortage of phenol or of labour in synthesising the compounds: conservation of ammonia compounds for use in explosives or as fertilisers may account for the inclusion of ammonium chloride, while the reference to liquid paraffin cannot be unconnected with the German retreat in the Caucasus. Of special interest is the fact that permission is given to provide a substitute for benzocaine, for the original proprietary, anaesthesin, is always supplied in Germany, and it rather looks as though the factory that makes it—part of the big I.G. Farbenindustrie—is unable to manufacture sufficient to meet demands."

ABSTRACTS

[ENZOOTIC ATAXIA OF LAMBS IN S. AUSTRALIA. McDonald, Ian, W. (1942.) *Aust. vet. J.* **18.** 165-171]

McD. reports the result of his investigations of a disease in lambs in S. Australia identical with enzootic ataxia (Bennets) in W. Australia, and swayback (Innes and Shearer) in this country.

Its aetiology is thus shown to be a copper deficiency of varying degree in the ewe, which fact governs the intensity of symptoms in the lambs—the greater the deficiency the more acute the symptoms and the younger the lamb affected. In general, however, the majority of McD's cases were mild and in lambs up to four months of age.

In identifying the condition with swayback, McD. describes its pathology as a demyelinisation of the motor tracts of the spinal cord with chromolytic changes in the red nucleus and large nerve cells of the spinal cord, noting certain differences (due probably to the milder type of case examined) between his cases and those described by Innes and Shearer. He claims, too, on the basis of one doubtful case in a four-year-old sheep, to throw some doubt on the latters' view that the disease is non-operative beyond the ante-natal stage.

W. T. R.

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[THE COLLECTION OF SEMEN AND ARTIFICIAL INSEMINATION IN THE DOMESTIC FOWL. Black, D. J., and Scorgie, N. J. (1942.) *Vet. J.* **98.** 108-113.]

After a brief introduction relating to previous work in this field, the authors describe at length the technique for the collection of semen from the domestic cock, and give the results of their insemination experiments. The erection of the male copulatory organ and the ejection of semen is stimulated by applying gentle massage to the abdomen between the gizzard and the pelvic bones. After about 30 seconds, from 0·5 to 1·0 c.c of a thick milky semen is discharged and can be collected in a glass funnel, the stem being blocked with paraffin wax. More semen can be collected by gently "milking" the bulbous ducts, adjacent to the cloaca, for a short time subsequent to the initial ejaculation.

Over a period of one month, 39 hens were inseminated with semen from an aged R.I.R. cock. The first eggs were taken for incubation 24 hours after insemination, and the maximum interval after insemination at which eggs were taken for incubation was 14 days. The equivalent of 0·05 c.c. of undiluted semen was put (*a*) on to the cloacal surface, (*b*) directly into the oviduct. Only one egg was fertile 48 hours after one insemination, but the percentage increased as the number of previous inseminations increased.

In two lots in which the semen was put directly on to the cloaca the percentage hatchabilities were 2·5 and 7·69 as compared with 44·65 and 37·12 when the semen was injected into the oviduct.

[Under natural conditions, a cock serves a hen several times at short intervals, thereby building up a high concentration of sperms. In the experiment far smaller numbers of sperms were inseminated at wider intervals; moreover, the cock was old and no attempt was made to cool the semen or conserve it in any way. If these precautions had been taken results might have been better.]

N. S. B.

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[THE PRODUCTION OF ARTIFICIALLY DRIED GRASS. (1942.) Bulletin 8. The Hannah Dairy Research Institute.]

This is another valuable publication, which may be added to the list of those already compiled by the H.D.R.I. on subjects of wide agricultural interest.

The process of grass drying is by no means a simple one and there are many aspects to be considered, all of which are dealt with in a detailed manner in the bulletin.

As indicated in the preface, the information is not regarded as conclusive and the data is based, not upon vast undertakings, but upon small-scale workings carried out under practical conditions as part of the ordinary routine of the Institute's farming activities. All types of drier and machinery could not therefore be tested out or compared.

The report falls into the following six parts—(1) The capital involved in grass drying; (2) the production of the wet herbage; (3) cutting, collecting and delivering grass to the drier; (4) the operation of drying grass; (5) the working costs and the return; (6) summary and conclusions—and will be found a valuable guide to those contemplating the establishment of grass drying plants or formulating future policy.

N. S. B.

Weekly Wisdom

For nothing is so productive of elevation of mind as to be able to examine methodically and truly every object which is presented to thee in life.—Marcus Aurelius.

NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

May 6th.—Meeting of the Central Veterinary Society, Conway Hall, Red Lion Square, W.C.1, 2.30 p.m.

May 7th.—Special Meeting of the North of England Division, N.V.M.A., at Newcastle-on-Tyne, 5.30 p.m.

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Prof. George W. Weir, J.P., M.R.C.V.S.

AN APPRECIATION

By the death of George Weir, the profession has lost another of that generation whose influence on the profession's immediate past and future is not yet fully appreciated.

Son of the late James Weir, F.R.C.V.S., he qualified from the Glasgow College with 1st Class Honours in 1902, having gained medals in each year.

After acting as locum and assistant for a year or two, he rejoined his father in an extensive horse practice in Glasgow, and was intimately concerned with the cleaning up of outbreaks of glanders at that time.

In spite of, or because of, the very busy life he led, he found time to interest himself in the Local Ward Committee and ultimately as a member of the Govan Parish Council, with a keen interest on questions concerning public health.

As a Veterinary Officer in the Territorials, he was called up on the outbreak of war in 1914, and served during that period. Many who served under him at that time speak affectionately of Captain Weir. He was that kind of man; competent at his job, direct in his speech and with a pawky sense of humour, he commanded respect by his character.

Returning to civilian practice in Glasgow he was asked to lecture at his old college on the subject of stable management and horse shoeing. On this subject he was an expert and recognised as such, not only by the Examiners of the R.C.V.S., but by all the blacksmiths with whom he came in contact. He lectured and examined for the W.F.C.L. He subsequently taught materia medica in addition to animal management.

He loved his profession and did everything in his power, by his honesty of purpose and enthusiasm, to foster a spirit of goodwill in his immediate area. He was active in the Local Division, of which he was Secretary for 25 years. Although not a prominent member of the N.V.M.A., he was in turn Secretary and President of the Scottish Branch, at the time when the branch prepared the Eradication Scheme for Tuberculosis, and in collaboration with Professor Wm. Robb, he was a member of the Euthanasia Committee of the N.V.M.A.

It is difficult in a word picture to convey just what it was about him that endeared him to the students. He was a good teacher. He always gave of his best and was always approachable. He was never demonstrative but was greatly touched during his illness by the many enquiries and kindnesses from the students. The pupils who saw practice at Crookston Street and Shields Road will have their own memories.

For my own part I have memories of him as a teacher, friend and partner, which makes the sense of loss that of a son for his father.

ALEX. THOMSON.

The Funeral

The interment took place at New Eastwood Cemetery, in the presence of a large company representative of all those with whom he had been associated. The veterinary profession was well represented: Mr. David Brown (Ayrshire Branch, N.V.M.A.); Capt. Wm. Watt, M.R.C.V.S., D.V.S.M. (Ministry of Agriculture); Mr. J. F. Taylor, M.R.C.V.S., Mr. R. K. Kent, M.R.C.V.S., Mr. Jas. McFarlane, M.R.C.V.S., Mr. R. Mitchell, sen., M.R.C.V.S., Mr. D. McLeod, M.R.C.V.S., Mr. S. G. Abbott, M.R.C.V.S., D.V.S.M., Mr. S. Jamieson, M.R.C.V.S., Mr. N. H. Mathieson, M.R.C.V.S., Mr. W. L. Weipers, M.R.C.V.S. (West of Scotland N.V.M.A.), Mr. A. H. F. Robb, M.R.C.V.S., Mr. R. N. C. Aitken, M.R.C.V.S. (Glasgow Veterinary College), Capt. C. Tracy, M.R.C.V.S., Mr. J. R. McCall, M.R.C.V.S., Mr. H. M. Wilson, M.R.C.V.S., Professor J. W. Emslie, M.R.C.V.S. (Scottish Branch, N.V.M.A.), Mr. Alex. Thomson, M.R.C.V.S. (partner), and J. B. Johnston (fourth year student). The floral tributes were many and beautiful.

PERSONAL

NEWS OF MEMBERS R.C.V.S. AFTER THE FALL OF SINGAPORE

Mr. William Orr, M.R.C.V.S., now Senior Veterinary Officer, Palestine, has forwarded to Dr. Fred Bullock, in a communication dated December 25th, 1942, the following information regarding members of the profession recently resident in or on leave from Malaya at the time of the fall of Singapore, and which we are glad to have the opportunity of publishing, as it will be of considerable interest to many of our readers.

Mr. W. J. McCubbin, B.SC., AGRIC., M.R.C.V.S. (as previously recorded), died in hospital in Singapore on February 4th, 1942, as a result of injuries received when a tractor which he was driving overturned.

The following members of the Malayan Veterinary Service are believed to be prisoners in Japanese hands:—

Captain S. H. Whitworth, B.V.SC., D.V.M., M.R.C.V.S.; Captain D. P. White, M.R.C.V.S.; Messrs. W. R. Wallace, M.R.C.V.S., D.T.V.M.; W. E Lancaster, B.A., M.R.C.V.S., D.T.V.M.; C, W. Wells, B.SC., M.R.C.V.S., D.T.V.M.; R. S. T. Bowden, M.R.C.V.S., and N. D. Scollard, B.V.SC.

Messrs. G. Rocker, M.R.C.V.S., R. A. Wright, M.R.C.V.S., and W. Orr, M.R.C.V.S., escaped from Singapore and were successful in reaching Australia by way of Sumatra and Java.

His Highness Tunku Abu Bakar, of Johore, reached India safely.

Messrs. R. A. B. Stanhope, B.V.SC., M.R.C.V.S., and R. Macgregor, F.R.C.V.S., were absent from Malaya on leave during the period of hostilities.

In addition to the members of the Malayan Veterinary Service Messrs. J. T. Forbes, M.R.C.V.S., and A. G. McCrea, M.R.C.V.S., D.V.S.M., Municipal Veterinary Surgeons, Singapore and Penang respectively, are also believed to be prisoners in Malaya.

Information was recently received from the Malayan Government Agency in Durban, South Africa, that Mr. A. E. Carey Foster, M.R.C.V.S., some time Veterinary Surgeon to the Straits Racing Association, had reached India.

mourn was none other than that Charles Allen, F.R.C.V.S., of Dublin, who, in the Courts of his country, fought for and won in 1903 that right of exemption from jury service for veterinary surgeons throughout Ireland which as yet is unattained by their colleagues on this side of the Irish Sea. Having been fined for non-attendance, Charles Allen contested being called upon to serve on the ground that he came within the description of persons exempted under Section 20 of the Juries Act, 1876, as being "a licensed medical practitioner," and the judges decided, by a majority, that he was entitled to exemption and to a remission of the fine. In this country, of course, only "registered medical practitioners" are exempt.

Mr. Peter G. P. Brain, of the Royal Veterinary College, an internal student, has passed the University of London B.Sc. (Veterinary Science) Examination.

Birth.—McNEIL.—On April 19th, 1943, at Bridgend, Glam., to Doris (*née* Kay) and Robert McNeil, M.R.C.V.S., D.V.S.M., a son.

Deep sympathy will be extended to Major Henry Allen, O.B.E., M.R.C.V.S., and Mrs. Allen, of Sidcup, in the death in action last month of their only son, Lieut.-Colonel Charles H. B. Allen, of the Royal Ulster Rifles (attached the Royal Inniskilling Fusiliers), formerly Adjutant and Second-in-Command, the London Irish Rifles. The family name is renowned in Irish veterinary legal history, for a great-uncle of the gallant officer whose death we

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LEGAL NOTES

"Shepherd's Responsibility" Plea Fails in Sheep Scab Case.—"Responsibility for sheep scab among 305 head, sent from the Lake District to winter on the marshes on the English side of the Solway Firth was discussed before Cumberland county magistrates at Carlisle on Saturday," reports *The Farmers' Weekly* of April 16th and proceeds: "Thomas Pattison, estate steward, of Rockcliffe, was summoned for failing to notify the police of the infection. It was stated that about 900 sheep were brought to the marshes in October from farms in Cumberland and Westmorland.

"Mr. J. K. Elmslie, veterinary inspector to the Ministry of Agriculture, said that when he examined them in February he saw at once that serious skin disease was present. The marsh was revisited on February 19th, and out of 896 sheep examined, 305 were infected with sheep scab.

"Mr. John Cameron, divisional inspector to the Ministry, said some of the sheep had lost so much wool that they were half naked. He found dykesides festooned with tags of wool. Twenty-six died from toxic exhaustion and inability to feed. All the 900 animals were still isolated and had been dipped four times.

"It was contended for the defence that the shepherd, not the steward, was to blame, but the magistrates declined to accept the plea.

"Mr. Pattison said that three parts of his time was occupied with rabbit-killing. He added that when the Cumberland W.A.E.C. sent 102 sheep to the marsh in December, he told them there was very little grass left, and to send more was to court disaster as there was not enough to eat.

"In fining Mr. Pattison £20, with £3 costs, the Chairman said: 'It is a shocking case, but the Bench is of opinion that you were badly let down by the shepherd, who should have notified you.'"

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In giving judgment for the plaintiff at Stafford County Court, in respect of a claim for £55 for the loss of a hunter mare which was kicked by defendant's gelding when on the road, the judge pointed out that if the owner of a horse knew that his animal might on occasions, without warning, kick another horse, it was his duty to take precautions.

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HILL CATTLE SUBSIDY SCHEME

The Government's intention to pay a subsidy of £3 per head for cattle kept on hill land in England and Wales has already been announced. Fuller consideration has since been given to the detailed conditions of the scheme, the principal features of which will now be as follows:—

The subsidy will be payable in respect of hardy home-bred cows, steers and heifers kept day and night on hill land in England and Wales for not less than five months in the year. Bulls, calves and cattle imported from Eire will not be eligible. Payment will be made in every case to the occupier of the hill land on which the cattle are grazed during the qualifying period whether he is himself the owner of the cattle or is taking them in on agistment. The knowledge that a grant will be payable to the occupier of a hill grazing on which eligible classes of cattle are kept for the qualifying period of five months will no doubt be taken into account when the terms of agistment are being arranged between the two parties. The primary object of the scheme is to secure the fuller use of hill grazings and the improvement of hill land; and in appropriate cases the payment of subsidy will be dependent on the carrying out of improvements to the land by the occupier.

A somewhat wider definition of hill land is being adopted for cattle than that which renders sheep eligible for the hill sheep subsidy. For the purpose of the cattle subsidy scheme hill grazings will be regarded as land which is normally used only for the rearing of stock and is not generally suitable for the production of milk for sale, fat stock or crops to any material extent. This definition will bring within the scope of the scheme cattle kept on the rougher uncultivated "in-bye" land, or fridd, and the lower slopes of hills on high lying marginal farms in hill districts.

The holding should be at least 50 acres in extent, of which not less than one-half should consist of rough grazings, including an appropriate proportion of any common land on which the applicant has grazing rights. Forms of application for the hill cattle subsidy will be obtainable shortly from County War Agricultural Executive Committees.

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CONTROL OF LAND DEVELOPMENT

The main purpose of the interim development Bill brought forward by Mr. W. S. Morrison, the new Minister of Town and County Planning, is to bring under planning control land which is not subject to a scheme or resolution under the Town and Country Planning Act, 1932. This will make it possible to secure more effective control of development pending the coming into operation of post-war planning schemes in town and country.

The Uthwatt Committee, in its interim report, recommended that an essential preliminary to effective post-war planning was to vest in the Central Planning Authority the power to control "building and all other developments throughout the whole country by reference to national planning considerations and with a view to preventing work being undertaken which might be prejudicial to reconstruction." The recommendation added that this control should continue for a reasonable period after the end of the war, while the broad lines of reconstruction were being worked out.

The Government recognised the necessity for some such interim control and Lord Reith stated in July, 1941, that it was thought that any further safeguards necessary for the time being could be provided by strengthening the provisions of the Planning Acts. A year ago Lord Portal announced that the legislation being drafted to give effect to this and other interim recommendations of the Uthwatt Committee was being postponed to await the final report of that committee, and also the report of the Scott Committee on land utilisation in rural areas. The final report of the Uthwatt Committee again emphasised the point that the control necessary to prevent prejudicial development during and immediately after the war should cover the whole country. Many important areas are not at present covered by planning resolutions, and the committee recommended as the most convenient method of achieving the object in view that legislation should provide that areas not already covered by operative schemes or resolutions to plan should be deemed to be subject to such resolutions. The Bill now introduced gives effect to this recommendation.

Of other decisions already taken upon recommendations of the Uthwatt Committee the Government have also promised to provide in forthcoming legislation for the appointment of a permanent commission to assist the Minister of Town and Country Planning. They have similarly announced the intention to confer on local authorities wide and simple powers for the compulsory acquisition of land.

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DUTCH CATTLE COMMISSION

"In view of the severe diminution of the Dutch cattle herd by the Germans, the Minister for Commerce, Shipping and Industry, in the Dutch Government in London, Mr. P. A. Kerstens, has established a commission for the study of problems connected with the decrease in the number of Dutch cattle," says the *Voice of the Netherlands* in its issue of March 20th, and continues: "It is the task of the commission to prepare measures which will be taken by the Dutch Government immediately after the liberation of the Dutch Kingdom in Europe. The world-famous Dutch cattle herds are to be raised quantitatively and qualitatively to the highest possible level within the shortest possible time.

"This is to be done not only to fulfil the urgent task of feeding the Dutch population, but also to make possible exports to other countries. In particular, the commission will pay attention to the necessity of combating the widespread cattle tuberculosis which has developed in Holland since the German invasion, so that the Dutch livestock will no longer constitute a source of infection endangering public health, but will speedily regain its traditional reputation for excellence.

"Experts estimate that, as the result of German requisitioning of Dutch cattle for slaughter, the cattle herd of Holland is now only little over half its pre-war size, which was 1 600,000 milch cows and 1,000,000 calves, heifers and bulls."

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AGRICULTURISTS' VISIT TO U.S.A. AND CANADA

The Ministry of Agriculture, the Department of Agriculture for Scotland, and the Ministry of Information have asked a party of four agriculturists with practical experience of the food production campaign to visit the United States and Canada in the near future. The party will consist of Mr. T. R. Ferris, executive officer of the Dorset War Agricultural Executive Committee; Mr. Watson Jones, Vice-Chairman of the Shropshire War Agricultural Executive Committee; Mr. T. B. Manson, Divisional Land Officer of the Department of Agriculture for Scotland; and Mr. A. G. Street, farmer and author. They will tour the United States and Canada, giving lectures on the British farmers' war effort. The visit is expected to last for two to three months.

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CO-OPERATIVE SYSTEMS IN EUROPEAN AGRICULTURE

Sir Richard Gregory, opening the recently held conference of the British Association on co-operative systems in European agriculture, said that the United Nations were co-operating with the single purpose of overcoming their common enemies, and thus of saving a large part of the civilised world from slavery. "There are many difficulties to be overcome before a commonwealth of the chief nations of the world accepts all that is implied in co-operative principles as generally understood. Yet there is every reason to hope for, and expect, such a combination of interests among the United Nations when they understand each other's social problems and needs."

Sir John Russell, director of the Rothamsted Agricultural Research Station, said that when the war was over it would be necessary to restart the agriculture of Europe, and this must be done on some definite plan or the confusion of peace would be almost as bad as that of war.

The representatives of the allied nations now in Britain had expressed themselves strongly in favour of high nutrition for their people as the purpose of their agriculture. If this view were adopted by all the allied countries after the war it would be a most potent factor in ensuring peaceful development.

All the evidence showed that Europe would prefer peasant proprietorship to large farms after the war. It was no exaggeration to say that the moneylender was one of the greatest problems in

peasant life. Co-operation offered the best solution that we knew at present.

He hoped that it might be possible to arrange for courses of training in co-operative methods to which European countries represented in Great Britain could send selected nationals.

"We hope, as the result of preparations now being made," he said, "that the Government of each country will be able to say to its peasants, as it enters to take charge after the expulsion of the enemy: 'Here is your land; here are seeds and implements; get on with your job of producing food for our hungry people—and from the start begin to co-operate. Here are people who will show you how to do it. Co-operate; it will give you a better return for your labour. It will give the country richer harvests from its lands.'"

Dr. C. R. Fay, the economist, stated that the weakness in English agriculture was the extraordinary nonsense talked by outsiders about its being a sort of depressed area which must be taken in hand by the Government and nationalised. The notion might suit experts, but it seemed extraordinary that the farmers should not be asked if they wanted the State as a landlord. He would like to see the Government and the National Farmers' Union widening their view as to the content of agricultural co-operation, and developing in their marketing schemes a stronger democracy.

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H.M. STATIONERY OFFICE PUBLICATION

The undermentioned has been published recently. Copies can be purchased through any bookseller, or directly from H.M. Stationery Office.

	Price net s. d.	*Post free* s. d.
COMMAND PAPERS (Session 1942-43):		
(6433.) Post-war Agricultural Education in England and Wales, Committee on (Chairman, The Rt. Hon. Lord Justice Luxmore, P.C.) Report. Jan. 27th, 1943	1 6	1 8

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MINISTRY OF AGRICULTURE NEWS SERVICE

A Spring Test.—Mr. R. Boutflour has told farmers that the approaching grass period will answer the question: "Have I fed my cows properly during the winter months?" If the yield goes down when cows go out to grass, the answer is yes. Should there be an increase the reply is, "No, I have still a lot to learn."

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Lucerne a Valuable Protein Hay and Silage Food.—Lucerne leys are a valuable source of protein food for dairy cattle and sheep. They store up fertility in the soil for succeeding corn crops and are especially useful at the present time, when the ploughing-up of grassland may make it necessary to supplement the grazing that remains with soiling crops.

A well-established lucerne ley provides three cuts in the year irrespective of drought conditions—the first and second cuts giving hay and silage, the third silage alone. An average rate of seeding is 20 to 25 lb. per acre, which may include 2 lb. of cocksfoot or Italian ryegrass, for pure lucerne is not easily made into hay.

Clean land is an essential foundation and if possible the preceding crop, preferably a green crop, should have received at least 15 tons per acre of farmyard manure. Seed may be sown, broadcast or drilled in April, and Atle spring-wheat makes an excellent cover-crop. A nurse-crop is sometimes dispensed with, but it is not in the nation's interest to throw away a crop of wheat or other cereal when this can be had in addition to the lucerne.

Before sowing, the seed should be inoculated—a simple and inexpensive process that ensures in the soil the presence of the bacteria necessary for a successful take. The cost of inoculation is about 3s. per acre and any good seedsman can supply the necessary materials.

Care must be exercised in the first year's cutting; for this is the plant's root development period. Two mowings are the maximum and the crop should be allowed to flower before the second cutting. A good rule is not to take the second cut in the first year until after corn harvest. Cutting, however, in any year, should be done before the crop becomes too fibrous.

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Dried Sugar-Beet Pulp.—The prudent farmer takes steps to provide himself with as much home-grown feeding-stuffs as possible from his land. Nevertheless, there are still many feeders—particularly milk producers—who have to buy concentrated feeding-stuffs to supplement those produced on the farm. Dried sugar-beet pulp should make special appeal to them. There is no other carbohydrate feed on the market to equal it in price or digestibility. More than three-quarters of it consists of carbohydrates, of which the bulk is digestible.

All kinds of stock readily eat this dried pulp and it will replace oats in both the production and maintenance ration of dairy cows. Supplies are, of course, limited, but owing to the good crop, sugar-beet pulp is rather more plentiful than was originally estimated. Farmers who make application to their dealers should be able to get what they want if they order without delay and submit the appropriate coupons.

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Damaged Potatoes Make Good Silage.—Damaged potatoes are easily made into silage. Steaming, then packing into a suitable container is all that is required. An unlined earth pit will do very well, but the silage comes out cleaner if use is made of an existing wall and a partition of old bricks built six feet away.

Seal the silo in the usual manner. The longer the potatoes are left the less greasy and more palatable will be the silage. Before ensiling, the steamed potatoes must be thoroughly drained, for the water may contain substances harmful to animals. Rotting potatoes must not be used.

Potato silage is a more valuable pig food than raw potatoes.

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Oats and Beans.—When soil is suitable a mixture of oats and beans is invaluable to all stock feeders. They are easy to harvest and thresh better than beans alone. One acre should be allowed for every two or three cows. If beans cannot be grown, sow half a bushel of Maple peas to the acre with the oats. The mixture will not have so high a feeding value as half beans and half oats and will necessitate more attention being paid to silage making.

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Thistles and Sheep.—In some parts, especially in Wales, sheep are said to bring thistles. It is certainly true that pastures hard grazed by ewes in March and April often produce an abundant crop of these weeds. The sheep, however, did not bring them, but offered the existing plants encouragement for growth by keeping down the grasses that would have smothered them. A thistle in early spring is a delicate plant and cannot stand competition and it has been proved that whenever it has been possible to withhold grazing until April the thistle population decreases year by year.

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Sacking the Bag.—"We should never again need to import such large quantities of concentrated animal feeding-stuffs," says the report on post-war agricultural policy issued by the Royal Agricultural Society of England. Most farmers now realise that the system of bag-feeding, so common before the war, was the cause of much land going out of cultivation and a general lack of knowledge of arable farming. Helped by modern scientific knowledge, mechanical power and improved implements, the present output of the soil cannot only be maintained, but it can be increased, provided every effort is made to produce the necessary amount of organic manure to keep the land, in conjunction with chemical fertilisers, at a high standard of productivity.

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Poultry Health: How to Guard Against Coccidiosis.—Coccidiosis means loss of birds and wasted feeding-stuffs. Chickens and turkey poults are the birds most frequently attacked. A critical period is from the second to the tenth week of life. Excessive moisture in the brooder-house and particularly a combination of moisture and warmth, may lead to the rapid development of the coccidiosis parasite in the droppings. Therefore, as far as possible keep the brooder-house dry and well ventilated.

Drinking water supplied to chicks should be raised off the ground and placed away from that part of the brooder-house where they are likely to do most picking and scratching. Another form of coccidiosis, though often less acute, attacks birds up to six months old or more.

If effective measures are to be taken to curtail an epidemic among a group of chickens, it is essential to diagnose the disease correctly. The frequent appearance of blood in the droppings is a useful, but not an infallible, guide. It is advisable not to attempt to cure affected birds, but rather to try to prevent the spread of disease to the healthy. Useful measures include rearing on wire-netting floors, with regular cleansing and keeping a separate piece of ground for chick rearing, on which adult birds are never allowed. Houses containing affected chicks should be thoroughly cleaned out once every 48 hours. Directly trouble is suspected the wisest course is to apply to the Country Poultry Instructor for information and advice.

Farm Gates.—No fence is stockproof unless the gate is dependable. A sound, well-hung gate with a hard and tidy gateway is an asset to any farm. A field gateway should not be less than 10 feet wide and in large enclosures it is advisable to have one entrance with double gates, giving a total width of 16 feet so as to admit any type of implement. Reinforced concrete for gate posts is more serviceable than wood, but if wood is used the posts should be creosoted under pressure. When there is a grass verge outside the field, the gate is best hung to open outwards, especially if the field is likely to be under cultivation. A stockproof stile at the side of a gate crossing a public footpath will easily pay for itself by elimination of trouble and annoyance through the gate being left open.

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If cows went back in October, was it lack of feeding-stuffs due to bad planning?

When are cows due to calve? Do autumn calvers predominate?

How much milk will be given to calves? Will full and proper use be made of National Calf Starter and calf meal, thus increasing the milk sales?

Are rations fed according to yield?

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MONOPOLIES IN DRUGS

The Society cannot be a disinterested spectator in any post-war attempt "to corner" the world's supply of important drugs. We write subject to correction, but we believe that such essential natural products as cinchona, opium, santonin and iodine have at one time or another been the subject of trading monopolies. There is no question that this has been so in the case of cinchona, and one effect has been the high cost of quinine imported into India, resulting in the inaccessibility of this vital medicine to millions of natives suffering from malaria. One writer has recently described the control as of vertical construction, affecting every phase of the production and marketing of quinine "from the ground up to the corner drug store, and every malaria sufferer, provided he had the price, paid toll to this trust." When it is remembered that in India alone the annual number of patients suffering from malaria has been put as high as 100 million, and that, according to some reports, "black market" quinine is being sold in India at 300 rupees a lb., the magnitude of the problem will be more clearly seen. It is not surprising that this situation has been noted by those responsible for planning post-war international price control, and certain recommendations have already been made. Although some of these may not be acceptable to the British Government—a matter on which we can claim no knowledge—it can, however, be a foregone conclusion that in spite of the development of synthetic pharmaceutical chemicals, no Ministry of Health or representative body of doctors and pharmacists would fail to approve of steps being taken to foster the unfettered distribution of quinine and of any other "known, admitted and approved" remedy that is needed in the treatment of disease.—*Pharm. J.*

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So far, £20 million has been raised during the war for the Red Cross and a tenth of that has come from the farming community, with administrative costs only 8d. in the £. The Duke of Norfolk, referring to the raising of the second million in a year, said the real success of the Red Cross Agriculture Fund was due to the great generosity of the rural people.

CORRESPONDENCE

Letters to the Editor should reach the Office not later than by the first post on Monday morning for insertion in following Saturday's issue.

The views expressed in letters addressed to the Editor represent the personal views of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

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VETERINARY SURGEONS ACTS (AMENDMENT) BILL

Sir,—Any doubts that may have existed about the generous hospitality of your columns must have been definitely and finally disposed of, in your issue of to-day, by your publication of the comments by the Secretary of "Our Dumb Friends' League" on the above matter.

My questions in my letter of March 27th were addressed to members of the Royal College of Veterinary Surgeons who would experience no difficulty in understanding what is meant in the professional sense by the words "advertising," "touting," "covering," etc.; but it would indeed be surprising if your correspondent, who is apparently not able to differentiate between inference and imputation, and is further handicapped by not being a member of the R.C.V.S., were other than uncertain on matters of professional discipline. I regret my inability to give any sanction to permit juggling with my punctuation, as that would enable to be placed on my words any meaning which I do not intend them to convey. With great care I have read through your correspondent's letter, but have been quite unsuccessful in discovering any trace of the "serious imputations" which the Secretary claims to be making—presumably against me. Perhaps if it is pointed out to this correspondent that recklessly to make imputations is a matter fraught with considerable legal danger, claims to be indulging in it will not in the future be so lightheartedly assumed.

Meanwhile it will not escape the notice of the profession that the first letter on the proposed Bill to come from an animal welfare society concludes as follows: ". . . surely the veterinary profession, wishing to place an Act on the Statute Book, would be advised to let everyone concerned, whether veterinary surgeons or not who are interested, know the full implications of the measure. In this way possible opposition can be overcome and the Bill, if it is intended to bring in the Bill, ensured a smoother passage."

Yours faithfully,

23, Queen's Gate Gardens, S.W.7. THOMAS LISHMAN.

April 17th, 1943.

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Sir,—The proposed Amendment Bill of the Veterinary Surgeons Act, to allow quacks legitimately to practise veterinary medicine and surgery, has been undoubtedly received with mixed feelings by all in the profession, especially the newly qualified and by the student, whom the Bill would undoubtedly affect most of all.

We see that the three main conditions appear to be as follows:—

1. That the quack is at least 26 years old.
2. That the quack is of good personal character.
3. That the quack has for at least five years been "giving medical and surgical aid to animals."

These three conditions were brought to the notice of the Veterinary Students' Conference, April, 1942, at Glasgow (see *Veterinary Record*, July 27th, 1942). Following that conference, there was a certain amount of correspondence between certain student bodies and the R.C.V.S. on that subject. We were eventually told that we had been misinformed!

Condition 1.—One can scarcely understand why the age limit stands at 26, for under such circumstances veterinary surgeons' sons entering the profession could have been taught by their fathers, thus saving the latter a small fortune. Could not this age limit be raised to at least 45 years old?

Condition 2.—"The quack must be of good personal character." Does this phrase mean to include that the quack must be capable of upholding the dignity of the veterinary profession? If not, the question of the quack obtaining references will be very simple for him.

Condition 3.—Are we to understand that five years' quackery can seriously be thought enough to allow these individuals to be legitimately turned loose on the public? And also, how can five years of quackery in any way compare with the *minimum* of five years which we spend at college?

It is said that in this country one cannot deprive a man of his living, yet surely, if by that living he is doing damage to livestock and causing unnecessary suffering to animals, then it is criminal, in these times especially, to allow him to continue, whether he is to be called quack, animal practitioner or any other name.

Dr. Wooldridge, at the Veterinary Students' Association Conference of January this year, advocated that the views of students should be heard by the profession. We hope, indeed, that it will be so in the case of this Bill.

The question of Animal Welfare Societies also arises. We are told that these societies are run, not for profit, but only for the benefit of the poor people's animals. How much more, therefore, would those poor people's animals benefit if those various clinics and hospitals were all taken over completely by the local veterinary surgeons of that area?

May I conclude by saying that the veterinary profession is a great and honourable one. To stop quackery is a necessity to us, but never let us do so if it means soiling and degrading its name, by the inclusion of quacks in the profession.

Yours faithfully,

Royal Veterinary College, Streatley. ROBERT S. TOWNSON, Final Year Student.

April 11th, 1943.